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Central Intelligence Agency

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Washington, D.C. 20505

DIRECTORATE OF INTELLIGENCE

SEP 7 1984

MEMORANDUM FOR: Ambassador Diana Lady Dougan
Coordinator, International Communication
and Information Policy
Department of State

FROM : [redacted]
Director of Global Issues

25X1

SUBJECT : Mexican Telecommunications [redacted]

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1. The attached memorandum responds to your request for background information for use in bilateral discussions with Mexico on telecommunications and information policy. The memorandum on the Mexican telecommunications organization, regulation, and industry was drawn from several [redacted] studies. We have summarized and augmented the materials in these studies with [redacted] press reporting. [redacted]

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2. Please direct any questions or comments to [redacted] Chief, Third World Issues Branch [redacted]

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[redacted]

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Attachment:
Mexican Telecommunications [redacted]
GI M 84-10160, September 1984 [redacted]

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[redacted]

GIM 84-10160

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SUBJECT: Mexican Telecommunications

OGI/ECD/TW: [redacted] (12 September 1984) 25X1

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MEMORANDUM

COMMERCE

Mexican Telecommunications

Organization of Telecommunications

[redacted] all communications regulations, standards, licensing and tariffs, are under the direct control of the Secretaria de Comunicaciones y Transportes (SCT). SCT is a Department of the Executive Branch of the Federal Government headed by Rodolfo Felix Valdes. [redacted] 25X1 25X1

Within the SCT, two agencies are responsible for the planning and administration of telecommunications services. The Direccion General de Telecomunicaciones (DGT) provides telex, video distribution to broadcasting stations, data communications, rural and marine communications, and international communications, including a portion of the long-haul national microwave network and the INTELSAT earth stations at Tulancingo. It also grants licenses and franchises. DGT is organized into four subdirectorates: rural telephone, licenses and international affairs, services, and administration. The Direccion General de Telegrafos Nacionales (DGTN) operates national and international telegraph services. [redacted] 25X1

The national public carrier, Telefonos de Mexico, S.A. (TELMEX), provides domestic public telephone service. Long-haul transmission services are owned jointly by TELMEX and DGT. The Chairman of the Board of TELMEX is the Secretary of Communications and Transport, an innovation of the present administration intended to reduce conflicts between the programs of the two major carriers. [redacted] 25X1

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September 1984

 [redacted] 25X1

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TELMEX is 51 percent government-owned and financed with shares sold on the stock exchange. In return for 51 percent of TELMEX stock, the government gives TELMEX 40 percent of the revenue from telephone taxes. According to an industry study, taxation is heavy and includes both a telephone use tax and a value added tax. New telephone subscribers are required to purchase shares in TELMEX. TELMEX obtains additional income from its investments in other companies such as Indetel and Ericsson. Over the years TELMEX has absorbed more than 100 independent telephone companies to create a single national public carrier. Those former independent companies are now subsidiaries of TELMEX. [redacted] 25X1

Regulatory Practices

SCT regulates TELMEX tariffs, approves expansion plans, and develops standards for telephone service. TELMEX service policies are similar to those for franchised monopoly carriers in other countries. TELMEX has an exclusive monopoly on the provision of services and equipment in its areas of responsibility. Intercity services provided over the network jointly owned by TELMEX and the DGT are also noncompetitive. Large users are permitted to lease private telephone lines but are not allowed to share or resell them.

[redacted] 25X1

The demand for intercity services has been increasing rapidly, but despite rapid network expansion, service to rural areas is poor. SCT is confronted with the problem of whether to invest in satisfying unmet demand for interurban services, or attempt to bring services to a large portion of the rural population that requires communications facilities. [redacted] 25X1

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Procurement Policies

TELMEX and DGT are the major purchasers of telecommunications equipment in Mexico. Together, they account for approximately three-quarters of the total market. In the private sector, major buyers of telecommunications equipment include broadcasting, transportation, fishing, retailing and insurance companies. [redacted] 25X1

TELMEX purchases all telephone equipment and DGT purchases all telex equipment. According to an industry study, both TELMEX and the DGT have used the same suppliers (e.g., Ericsson, Indetel) for years. Government policy, to date, has been to allocate contracts among existing suppliers but not to allow the entry of new suppliers into the market. TELMEX's procurement policy is to buy mainly from local manufacturers. Imports are, to a great extent, from the parent companies of the local subsidiaries owned, at least in part, by TELMEX. [redacted] 25X1

All suppliers to the federal government must be registered as approved suppliers to the public sector with the Directorate General of Procurement and Supply Standards and the Secretariat of Commerce. By law, all government procurements are now required to be put out for tender. Foreign suppliers reportedly provide only the most essential information concerning their operations. Once approval is granted, the supplier may sell to all federal agencies without further requirements. [redacted] 25X1

Equipment Suppliers

Table I provides data on the telecommunications equipment market for 1979-82 and projected 1987. This data shows that Mexican telecommunications firms mainly produce telephone, transmission, and mobile radio equipment. They produce virtually no video or radio broadcasting, data communications, test and measurement or satellite transmission equipment. [redacted] 25X1

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Table II shows telecommunications equipment suppliers and the type and origin of their products. [redacted] major suppliers of telephone switching equipment and PBX systems are subsidiaries of Ericsson (Sweden) and ITT and GTE (US). All three have been operating in Mexico for over 20 years and have 49 percent foreign participation. Siemens Telecommunicaciones, S.A., a subsidiary of Siemens of Germany, has been the major supplier of telex switching equipment. [redacted] 25X1 25X1

According to a Department of Commerce study, the market for data communications equipment is supplied primarily by imports from the US, with an increasing share coming from Europe and Japan. Transdata has begun local production of data switching equipment, but most of the market is supplied by imports from the United States. Local production of modems is growing with Syscom, GTE and Transdata dominating the market. Multiplexers are also produced locally by Syscom and Transdata. [redacted] 25X1

Table III shows Mexican imports of telecommunications equipment from the OECD countries during the 1978-1982 period. The figures include components which Mexican companies import and then assemble for local production. An industry study shows that the United States maintained its dominant position with a 58 percent share of Mexican telecommunications imports in 1982. However, aggressive marketing by the Japanese increased their share in the Mexican market from 7 percent in 1978 to 21 percent in 1982. Canada also boosted its exports five-fold during the same period. [redacted] 25X1

Domestic Satellite Communications

In December, 1985 the Mexican satellite system, "Project Morelos", is scheduled to begin. It will provide telephone, telegraph, television, telex and radio services. The major user of the satellites will be Telefonos de Mexico (TELMEX). According to press reports, 45 percent of the Morelos system

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will be used for commercial telephone services such as energy, agriculture, and banking networks. Another 30 percent will provide rural telephone services, and the remaining 25 percent will be slated for other uses. [redacted] 25X1

Four major US companies are involved in the construction and launching of the two satellites that will eventually make up the Morelos system. They are:

- Hughes International Communications -- construction of the two spacecraft under a $92 million contract.
- COMSAT General Corporation -- assembling the launch vehicles under a $2.4 million contract.
- McDonald-Douglas -- building the launch vehicle for the first satellite under a $11.3 million contract.
- NASA Space Transport System -- management of the launch from the Kennedy Space Center under a $24 million contract. [redacted] 25X1

Research and Development

We know little about Mexico's telecommunications R&D priorities The National Council for Science and Technology (CONACYT) was established in 1970 to participate in the formulation of government science and technology policy. Our analysis indicates that it has failed to strengthen the relationships between research institutes and the private sector. TELMEX has its own R&D section backed up by GTE, ITT and Ericsson and sometimes by other US companies. According to an industry study, experiments and testing are carried out on telephones, multiplex systems, facsimile units, modems and teleprinters. [redacted] 25X1

Trade Restrictions

According to an industry study, import tariffs on telecommunications equipment average about 10 percent, although duties as high as 50 percent are applied to equipment such as telephones with automatic devices and telephones for public service. For radio and television broadcasting equipment, tariffs range from 15-30 percent. Preferential rates of 1-5 percent are charged on

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certain goods from Bolivia, Brazil, Ecuador, Paraguay, Argentina and Uruguay. Member countries of the Latin American Integration Association are exempt from tariffs on terminal boxes for teleprinters and pay 5 percent rather than 10 percent on mobile radio and nonmobile multiband radio. [redacted] 25X1

A restrictive import permit policy is administered by the Ministry of Commerce in an effort to bolster domestic production of telecommunications equipment and reduce dependence on foreign suppliers. In addition, the public sector follows a "buy Mexican" policy. Government agencies have access to the preferential government-controlled exchange rate when importing various types of telecommunications equipment. [redacted] 25X1

Foreign Investment Controls

Mexico wishes to move quickly into high technology areas that domestic production can not yet supply. As a result, the de la Madrid Administration has taken a slightly more flexible approach to foreign investment and will consider proposals for majority foreign ownership in certain high priority industries such as computers and telecommunications. While the law on foreign investment has not been altered, we believe government approval will be easier to obtain if ventures are export oriented, bring in new technology, use domestic suppliers, and are situated in economically depressed areas. According to press reports, skepticism about Mexico's foreign investment policies remains high. Business executives argue that companies with minority foreign ownership receive quicker approval for new ventures than 100 percent foreign-owned companies, even in the high-technology areas where the government said it would not oppose majority ownership. [redacted] 25X1

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The Competitive Environment

The subsidiaries of large multinational corporations continue their historic domination of the Mexican telecommunications market. [redacted] 25X1

[redacted] other companies are gaining a share of the market, particularly the Nippon Electric Company (NEC). The French are also undertaking aggressive marketing efforts. The Canadians are pursuing joint ventures to manufacture communications equipment and telephone systems in Mexico. [redacted] 25X1

DGT and TELMEX set technical standards for telecommunications equipment. Because standards are generally international, technical requirements do not benefit any particular supplier. However, the local presence of GTE, Indetel and Ericsson (in telephone) and Siemens (in telex) make it difficult for other foreign suppliers to export to Mexico. We believe competitive access is also limited by the government's "buy Mexican" policy, import regulations and other measures favoring local producers. However, the liberalized interpretation of the investment law may encourage new entrants in the local market. [redacted] 25X1

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Table I

MEXICO: The market for telecommunications equipment, 1979-82 and projected 1987
(in thousands of U.S. dollars)

	1979	1980	1981	1982	Projected 1987
Telephone and telex equipment					
Local production	164,158	182,130	256,630	219,572	221,300
Imports	33,215	35,229	30,024	22,062	23,250
Exports (less)	2,124	795	551	564	10,000
Total	195,249	216,564	286,103	241,070	234,550
Transmission equipment					
Local production	42,162	49,500	56,500	36,805	64,750
Imports	18,353	25,539	46,908	14,113	9,900
Exports (less)	13,776	6,721	1,872	79	17,300
Total	46,739	68,318	101,536	50,839	57,350
Mobile radio					
Local production	6,500	7,250	14,100	9,976	11,330
Imports	5,030	9,168	6,452	2,530	900
Exports (less)	---	114	29	---	230
Total	11,530	16,304	20,523	12,506	12,000
Video and radio broadcasting equipment					
Local production	750	850	900	531	1,180
Imports	30,325	43,715	65,062	15,830	18,250
Exports (less)	---	---	---	---	---
Total	31,075	44,565	65,962	16,361	19,430
Data communications equipment					
Local production	250	375	560	440	2,260
Imports	4,200	6,300	9,500	6,693	5,650
Exports (less)	---	---	--	---	560
Total	4,450	6,675	10,060	7,133	7,350
Communications test and measurement equipment					
Local production	---	---	---	---	100
Imports	4,374	5,893	3,489	2,419	2,500
Exports (less)	---	---	---	---	---
Total	4,374	5,893	3,489	2,419	2,600
Satellite transmission equipment					
Local production	---	---	---	---	---
Imports	1,315	1,089	571	76	1,500
Exports (less)	---	---	---	---	---
Total	1,315	1,089	571	76	1,500
Services					
Local production	3,000	3,000	3,500	3,000	4,000
Imports	1,000	2,000	2,500	1,500	1,000
Exports (less)	---	---	---	---	---
Total	4,000	5,000	6,000	4,500	5,000
Total market					
Local production	216,820	243,105	332,190	270,324	304,920
Imports	97,812	128,933	164,506	65,223	62,950
Exports (less)	15,900	7,630	2,452	643	28,090
Total	298,732	364,408	494,244	334,904	339,780

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Table II

Telecommunications Equipment Suppliers

Name	Country of Manufacture	Type of Equipment
Telephone and Telex Equipment		
Conductores Monterrey	Mexico	Scramblers
Condutel	Mexico	Telephone cable
Cuttler Hammer	Mexico	Circuit breakers, starters, and control equipment
Ericsson	Mexico	Telephone switches and switching systems, subscriber/user premises equipment, other telephone and central office equipment
GTE	Mexico	Telephone switches and switching systems, subscriber/user premises equipment, coin-operated telephones, PBX switches and switching equipment, fire protection equipment, breakers and thermo fuses, scramblers
Indetel	Mexico	Telephone switches and switching systems, subscribers/user premises equipment, other telephone and central office equipment
Industria Telecomunicaciones	Mexico	Scramblers
Industrias Electronica	Mexico	Scramblers
Latincasa	Mexico	Wire and cable
Protectolada	Mexico	Scramblers
Siemens	Mexico	Telex systems
GTE	United States	Scramblers, slow scan video sets
Motorola	United States	Facsimile equipment, slow scan video sets
Akai	Japan	Scramblers
Ericsson	Sweden	Scramblers
Hitachi	Japan	Recording and answering devices, automatic dialers
ITT	France	Scramblers
National	Japan	Slow scan video sets
Philips	Netherlands	Facsimile equipment, slow scan video sets
Sony	Taiwan	Recording and answering device
Sony	Japan	Recording and answering devices, slow scan video sets
Telefunken	Germany	Automatic dialers, slow scan video sets
Toshiba	Japan	Facsimile equipment, recording and answering devices
Transmission Equipment		
Componentes Electronicos	Mexico	Hf radio
Conductores Guadalajara	Mexico	Coaxial cable, hf radio
Conductores Monterrey	Mexico	Wire and cable, coaxial cable hf radio
Condumex	Mexico	Wire and cable, coaxial cable hf radio
FESA	Mexico	Wave guide carriers
Indetel	Mexico	Carrier trunks
Industria Electronica	Mexico	Hf radio
Industrias Sintronic	Mexico	Hf radio
Latincasa	Mexico	Wire and cable

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Table II (Cont'd)

Name	Country of Manufacture	Type of Equipment
Sistemas y Componentes Mexicanos	Mexico	TDMs
Telextra (GTE)	Mexico	Carrier trunks
Telefonos de Mexico	Mexico	Wave guide carriers
Cobra	United States	Hf radio
Collins	United States	Microwave equipment
GTE	United States	Microwave equipment, antennas, carrier trunks
General Electric	United States	Microwave equipment
IUSA	United States	Protection switch-gear
Motorola	United States	Hf radio
Simplex	United States	Coaxial cable
Skyline	United States	Hf radio
Westinghouse	United States	Hf radio
Cuttler Hammer		Protection switch-gear
Ericsson	Sweden	Multiplexers
ITT		Multiplexers
National	Japan	Microwave equipment, antennas
Philips	Netherlands	Hf radio, multiplexers
Standard Elektrik Lorenz	Germany	Antennas
Telektra	Italy	Microwave equipment
Mobile radio		
Alba	Mexico	Marine radios
Macromex	Mexico	Radios of less than 45 W, FM singleband, marine radios
Bendix	United States	Ground installations for air-ground communication
Cobra	United States	Mobile radios
Collins	United States	Ground installations for air-ground communication
General Electric	United States	Mobile radios, paging systems
Motorola	United States	Mobile radios, mobile telephones, paging systems, ground installations, for air-ground communication
National	Japan	Mobile radios, mobile telephones
NEC	Japan	Mobile telephones, paging systems
Philips	Netherlands	Mobile radios
Sony	Japan	Mobile radios
Video and audio broadcasting		
Arquimetalica	Mexico	Antenna towers
Eyesa	Mexico	Antenna towers
FESA	Mexico	Antenna towers
GTE	Mexico	Antennas, transmission lines
Techos y Estructuras	Mexico	Antenna towers
Admiral	United States	Receivers

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Table II (Cont'd)

Name	Country of Manufacture	Type of Equipment
Dynair Electronics	United States	CCTV
General Electric	United States	Receivers, scan converters, TV transmitters, antennas, transmission lines, radio studio equipment
Motorola	United States	Radio broadcasting equipment, monitors
RCA Victor	United States	Radio broadcasting equipment, video studio equipment, monitors, TV transmitters
Westinghouse	United States	TV transmitters, antennas, transmission lines
Hitachi	Japan	Monitors, video studio equipment
National	Japan	Radio broadcasting equipment, CCTV, receivers, scan converters
NEC	Japan	CCTV, antennas, transmission lines
Philips	Netherlands	CCTV, TV transmitters, video studio equipment
Sony	Japan	CCTV, monitors, radio and video studio equipment
Telefunken	Germany	Video studio equipment
Toshiba	Japan	Monitors, radio and video studio equipment
Data communications		
GTE	Mexico	Modems
Syscom	Mexico	Modems, multiplexers
Transdata	Mexico	Modems, multiplexers
Codex	United States	Concentrators, modems, multiplexers, switching equipment
GDC	United States	Concentrators, multiplexers, switching equipment
ITT	United States	Modems
Infoton	United States	Multiplexers
Micom	United States	Concentrators
Norfield	United States	Switching equipment
Paradyne	United States	Modems
Communications test and measurement equipment		
Comex	United States	Telegraph signal test sets
Hewlett Packard	United States	Analog line, selective level transmission sets, transmission characteristics testers, spectrum analyzers, standard signal generators (less than 1 GHz), equalization and coil loading measurements, oscilloscopes and chart recorders, telegraph signal test sets, bit error performance testers, PCM system analyzers, data monitors, simulators
Muirhead Addison	United States	Cable loss characteristics measurement
Polarand	United States	Analog line, selective level transmission sets, spectrum analyzers, microwave sweep generators, frequency response analyzers
RCA Victor	United States	Transmission characteristics tests, spectrum analyzers, simulators
Rolm	United States	PCM system analyzers

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Table II (Cont'd)

Name	Country of Manufacture	Type of Equipment
Systron	United States	Spectrum analyzers, microwave sweep generators, bit error performance testers
Tectronics	United States	Data monitors
Tectronix	United States	Standard signal generators (less than 1 GHz), frequency response analyzers
Telesco International	United States	Interface testers
Texscan	United States	Analog line, selective level transmission sets, transmission characteristics testers, white noise test sets (FEM), spectrum analyzers, standard signal generators (less than 1 GHz), microwave sweep generators, equalization and coil loading measurements, oscilloscopes and chart recorders, frequency response analyzers, cable loss characteristics measurement
Tri-tronics	United States	Telegraph signal test sets
Wabatek	United States	Microwave sweep generators
Yew	United States	Telegraph signal test sets, white noise test sets (FEM)
Akai	Japan	Analog line, selective level transmission sets, spectrum analyzers, oscilloscopes and chart recorders
Gossen	Germany	Data monitors
NEC	Japan	TV wave for monitoring
Philips	Netherlands	Analog line, selective level transmission sets, oscilloscopes and chart recorders
Rolhm	Germany	TV wave for monitoring
Telectronics	Japan	White noise text sets (FEM), spectrum analyzers, standard signal generators (less than 1 GHz), equalization and coil loading measurements
TMK	Japan	Telegraph signal test sets
Yokagawa	Japan	Bit error performance testers

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Table III

MEXICAN IMPORTS OF TELECOMMUNICATIONS EQUIPMENT FROM OECD COUNTRIES

($ THOUSANDS)

SUPPLIERS	1978	1979	1980	1981	1982
AUSTRALIA	10	95	NA	NA	150
AUSTRIA	253	171	164	102	37
BELGIUM					
LUXEMBOURG	7,602	6,312	6,721	8,887	6,675
CANADA	1,674	2,619	4,648	7,589	9,137
DENMARK	63	4	231	1,064	340
FINLAND	230	279	456	469	244
FRANCE	5,351	5,227	8,924	7,492	9,545
GERMANY	10,590	9,169	16,429	16,792	14,929
IRELAND	--	--	--	4	5
ITALY	2,454	4,220	3,891	9,008	12,173
JAPAN	12,912	23,453	NA	NA	64,056
NETHERLANDS	7,446	2,801	6,101	3,105	2,617
NORWAY	91	44	75	250	140
SPAIN	--	--	1,462	3,098	4,621
SWEDEN	30,488	32,864	70,396	62,713	962
SWITZERLAND	220	225	1,110	579	483
UNITED KINGDOM	2,775	1,144	1,962	3,727	3,549
UNITED STATES	105,360	213,649	175,717	205,733	178,916
TOTAL	187,519	302,276	298,287	330,612	308,579

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